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Soil Conservation Service

Portland, Oregon



Water Supply Outlook for Oregon as of FEBRUARY 1, 1983



TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: FRESH POWDER SNOW ON ELEPHANT MOUNTAIN, NEAR THE WEST FORK OF HYALITE CREEK. IN MONTANA.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE ADDRESS

Alaska Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504

Arizona Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025

Colorado (N. Mex.) P. O. Box 17107, Denver, Colorado 80217

Idaho Room 345, 304 N. 8th. St., Boise, Idaho 83702

Montana P. O. Box 98, Bozeman, Montana 59715

Nevada P. O. Box 4850, Reno, Nevada 89505

Oregon 1220 S. W. Third Ave., Portland, Oregon 97204

Utah 4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138

Washington 360 U. S. Court House, Spokane, Washington 99201

Wyoming P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.



★GPO 693-033

WATER SUPPLY OUTLOOK FOR OREGON

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

FEBRUARY 1, 1983

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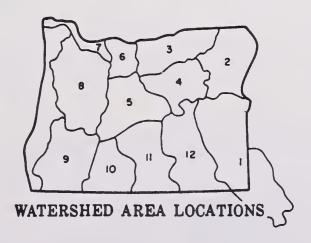
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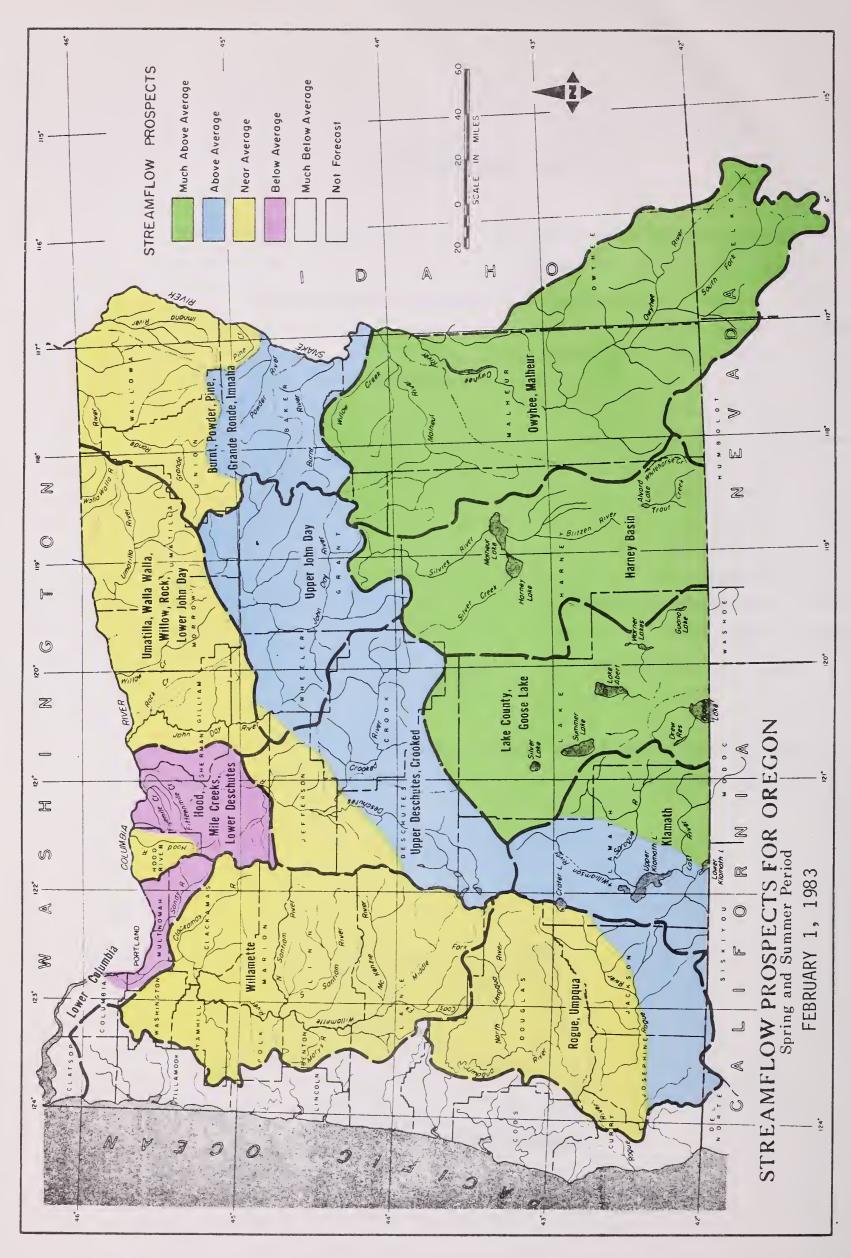


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WATER SUPPLY OUTLOOK AND SUMMARY

FOR OREGON

FEBRUARY 1, 1983

SNOW COVER

The snowpack is mostly average to much above average over the state. However, the west side of the Cascades from the Umpqua drainage north has a snow cover ranging from 60 to 80 percent. Snow courses in this area received much less than the normal January amounts of snow. The snow at Cascade Summit Snow Course near Willamette Pass decreased form last month. The snow pack along the southern Oregon counties is the best in the state and is 125 to 180 percent of normal.

PRECIPITATION

The main storm track over the west coast remained south of Oregon during January. As a result precipitation was mostly below normal. Only the Hood River area and extreme eastern Oregon received normal January precipitation amounts. Precipitation since November 1, has been near normal at most locations in the state.

RESERVOIR STORAGE

Twenty-six principal irrigation reservoirs are storing 2,320,600 acrefeet of water as of February 1. This is 115 percent of average.

STREAMFLOW

Volume forecasts have been reduced from last month. However, spring and summer streamflow is still expected to be average to much above average in Oregon.

Prospective streamflow as a percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
Owyhee net Inflow	FebrJuly	130
Grande Ronde @ La Grande	March-Sept.	92
Umatilla @ Pendleton	March-Sept.	92
Deschutes @ Benham Falls	April-July	107
Willamette Mid. Fork near Oakridge	April-July	96
Rogue @ Raygold	April-July	108
Upper Klamath Lake net Inflow	Febr. Sept.	116
Silvies near Burns	March-July	134

These forecasts assume normal weather conditions will occur throughout the forecast period. The thirty day weather forecast issued by the National Weather Service on February 1 indicates below average precipitation and above normal temperatures for Oregon.

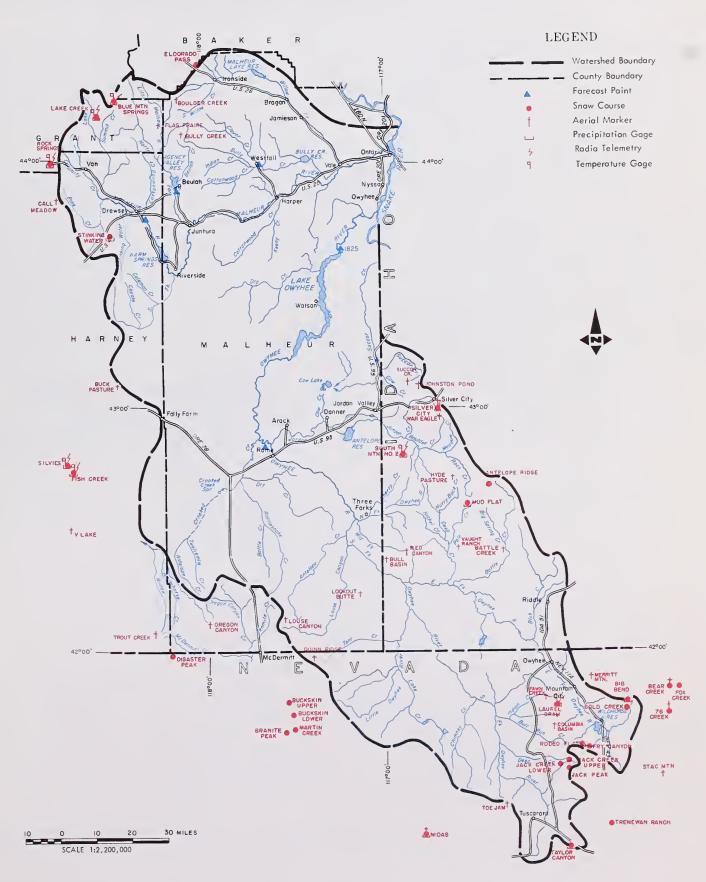
The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA Nation Weather Service and other cooperators.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are expected to be adequate. The streamflow in Malheur County will be much above average this summer. The snowpack is still very good especially in the southern portion of the county. Precipitation was slightly less than average for January and 128% of average for the October-January season. Reservoir storage in Malheur County is very good with the storage being 132% of normal for this time of year.



REAMFLOW FORECASTS	THIS YEAR			PAST RECORD		
	FORE		FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C	
Bully Creek at Warmsprings Malheur near Drewsey Malheur, North Fork at Beulah Owyhee Reservoir net Inflow Owyhee near Rome Succor Creek near Jordan Valley	18.3 139 98 102 80 751 529 798 20	145 130 135 125 120 130 135 130	March-May FebJuly April-Sept. FebJuly April-Sept. FebJuly April-Sept. FebJuly FebJuly		12.6b 107 73 82 67 578 392 614 15.4b	

FORECAST DATE of LOW FLOW VALUES

RECERVOIR STORAGE (Thousand Ac Ft) END OF MONTH

TONEONS! DATE OF LOW	ILUII IAL	ULJ		KEZEKANIK ZINKARE (I	nousanu	AU. FL.	END OF	MONTH
FORECAST POINT	Low Flow Value	Ju Cam min	Average Date of Low Flow	RESERVOIR	Usable		sable Stora	ge
	Second/Ft.	Recede to Low Flow Value	Value	NESERVOII.	Capacity	This Year	Last Year	Average C
Owyhee near Rome	2000 1000 500		May 14 May 28 June 11	Beulah Reservoir Bully Creek Owyhee Warmsprings	60.0 30.0 715.0 191.0	42.5 19.8 619.0 139.2	39.6 19.4 421.0 119.7	27.9 14.9 485.1 95.2

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

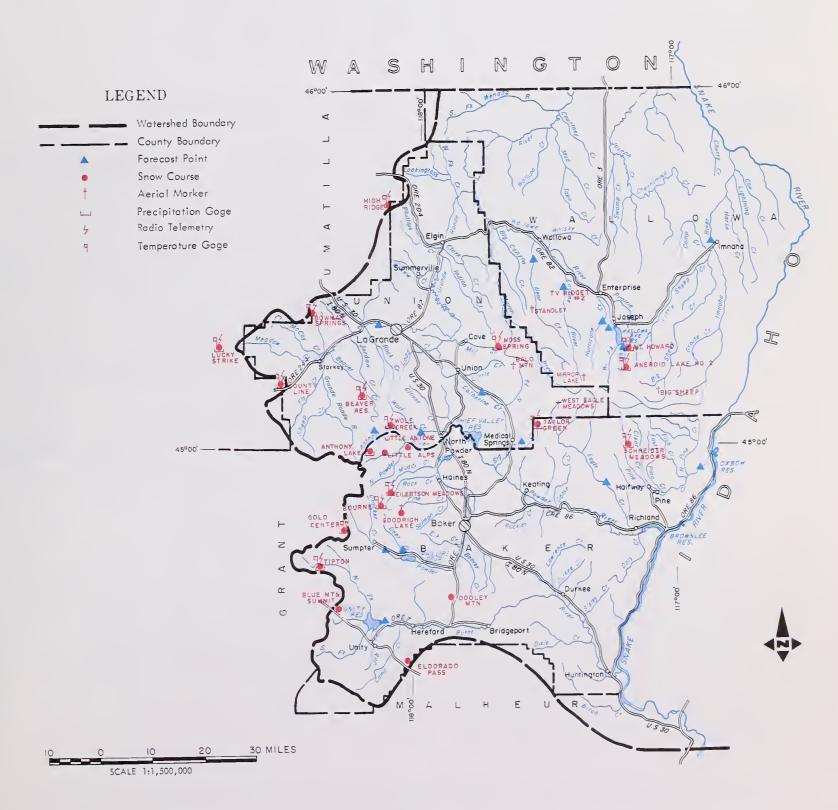
RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT O			
SUB-WATERSHED	Averaged	Last Year	Average C		
Jordan Creek Malheur River Owyhee River Bully Creek	1 4 6 -	105 84 93 	155 128 152 		

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supplies are expected to be adequate. Streamflow will be near average this summer. It ranges from 90 percent for Pine Creek to 130 percent for the Powder River. The snowpack didn't increase as much as usual during January, but it is still near average. The precipitation during the past month was 91 percent of normal and it has been 93 percent for the winter season. Reservoir storage is 128 percent of normal for this time of year.



STREAMFLOW FORECASTS		THIS YEA	PAST RECORD		
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average (
Anthony Creek Blw. North Fork nr. North Powder	21	121	Fob 1lv		17.2
Bear near Wallowa	67	121 103	FebJuly April-Sept.		17.3 65
Big Creek Blw. Burn Creek nr. Medical Spring	14.6	119	FebJuly		12.3
Burnt near Hereford	60	120	FebJuly		50
But no near nere for a	43	119	April-Sept.		36
Catherine near Union	66	104	April-Sept.		64
Deer Creek Abv. Phillips Res. nr. Sumpter	20	111	FebJuly		18.3
Eagle Creek abv. Skull Creek	169	100	April-July		169
	184	100	April-Sept.		184
Grande Ronde at La Grande	182	92	March-Sept.		199
	150	93	April-Sept.		161
Hurricane near Joseph	45	98	April-Sept.		46
Imnaha at Imnaha	309	101	April-Sept.		305
Lostine near Lostine	120	98	April-Sept.		123
Pine Creek near Oxbow	214	90	FebJuly		238
Powder near Sumpter	71	126	April-July		57
	76	130	April-Sept.		58
Wallowa, East Fork near Joseph	13.1	102	FebSept		12.8
Wallowa at Joseph	11.8	103	April-Sept.		11.5
Wallowa at Joseph Wolf Creek Res. net Inflow	69 15.4	100	May-July March-June		69
WOIT Creek Res. Het IIIIIOW	15.4	116	ria ren-June		13.2
	4				

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

toolittoit orottial			LIVD OI	11011111
DECEDIVOLD	Usable	U	ge	
RESERVOIR	Capacity	This Year	Last Year	Average ^C
Phillips Lake Thief Valley Unity Wallowa Lake Wolf Creek	73.5 17.4 25.2 37.5 10.4	58.6 17.8 16.3 26.3 4.9	47.0 17.7 15.2 22.5 3.1	43.7 15.5 12.5 21.4

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

(COMPARISON WITH PREVIOUS TE	AKS)				
RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF			
SUB-WATERSHED	Averaged	Last Year	Average C		
Burnt River Grande Ronde River above La Grande Powder River Wallowa, Imnaha, Catherine Creek	4 3 5 5	79 51 89 83	115 86 112 108		

FORECAST DATE of LOW FLOW VALUES

TONEGAST DATE OF LOW	LEOM AVE	OE2	
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Eagle Cr. abv. Skull Cu	225 160	July 26 Aug. 5	July 25 Aug. 5 Avg.value
Catherine Cr. Nr. Unior	51 100 50	Aug. 1 July 10 July 29	49 July 9 July 28
Powder near Sumpter	100 20	June 27 July 23	June 25 July 22
Deer Cr. abv. Phillips Res. near Sumpter	40 10	June 17 July 5	June 17 July6

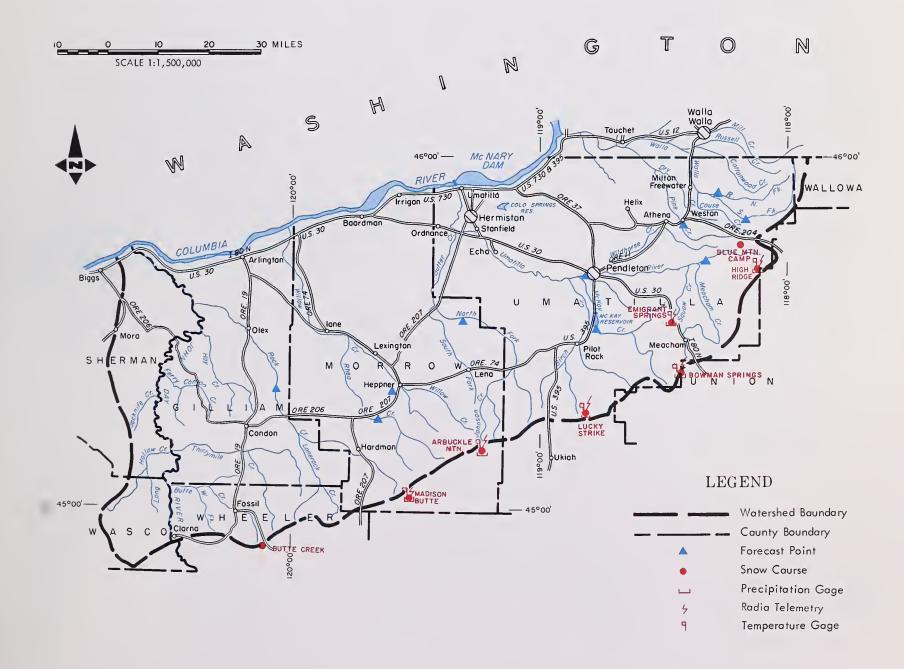
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are expected to be adequate. Streamflow for the area will be slightly below normal this summer. It ranges from 85 percent of normal on Rhea Creek to 98 percent on Willow Creek. January precipitation was only 61 percent of average so the snowpack didn't increase as much as expected. The mountain snowpack is 90 percent of the February first normal. Current reservoir storage is 130 percent of normal for this time of year.



STREAMFLOW FORECASTS THIS YEAR PAST RECORD FORECAST THOUSAND ACRE FEET FORECAST Thousand Acre Feet Percent of Average BASIN, STREAM and/or FORECAST POINT Average C Last Year PERIOD 9.8 Butter Creek nr. Pine City 92 March-July 10.7 Couse Creek near Milton Freewater 6.1 85 Feb.-July 7.2b McKay Creek near Pilot Rock April-Sep. 19.6 89 22 Pine Creek near Weston 89 5.1 Feb.-July 5.7b Rhea Creek near Heppner 8.1 6.9 85 Feb.-July Rock Creek abv. Cayuse Canyon near Condon 90 18.0 Feb.-July 20 b Umatilla River abv. Meacham Cr., near Gibbon 90 91 March-Sep. 99 72 92 April-Sep. 78 Umatilla River at Pendleton 188 92 March-Sep. 204 92 138 April-Sep. 150 Walla Walla River So. Fork near Milton 79 97 March-Sep. 82 96 66 April-Sep. 69 Willow Creek at Heppner 98 8.3 Feb. July 8.4

ENRECAST DATE of LOW FLOW VALUES

RESERVOIR	STORAGE	(Thousand	Ac. Ft.)	END OF MONTH
-----------	---------	-----------	----------	--------------

LOKECASI DATE OF LOW	LLUM ANT	UE2		KEZEKANIK ZINKARE (II	nousand l	AC. PT.)	END OF M	10NTH
FORECAST POINT	Low Flow Value Forecast Date Stream Will of Low Flow		RESERVOIR	Usable	Usable Storage			
	Second/Ft.	Recede to Low Flow Value	Value		Capacity	This Year	Last Year	Average C
Umatilla at Pendleton	550	May 18	May 17	Cold Springs	50.0	32.3	28.4	28.5
So. Fk. Walla Walla near Milton	200	June 4	June 9	McKay	73.8	49.4	49.0	34.4
	102	AugSep. Min. flow	Avg.value					
		,						
				CHMMARY of CNOW ME	MADIIDA	FNTC		

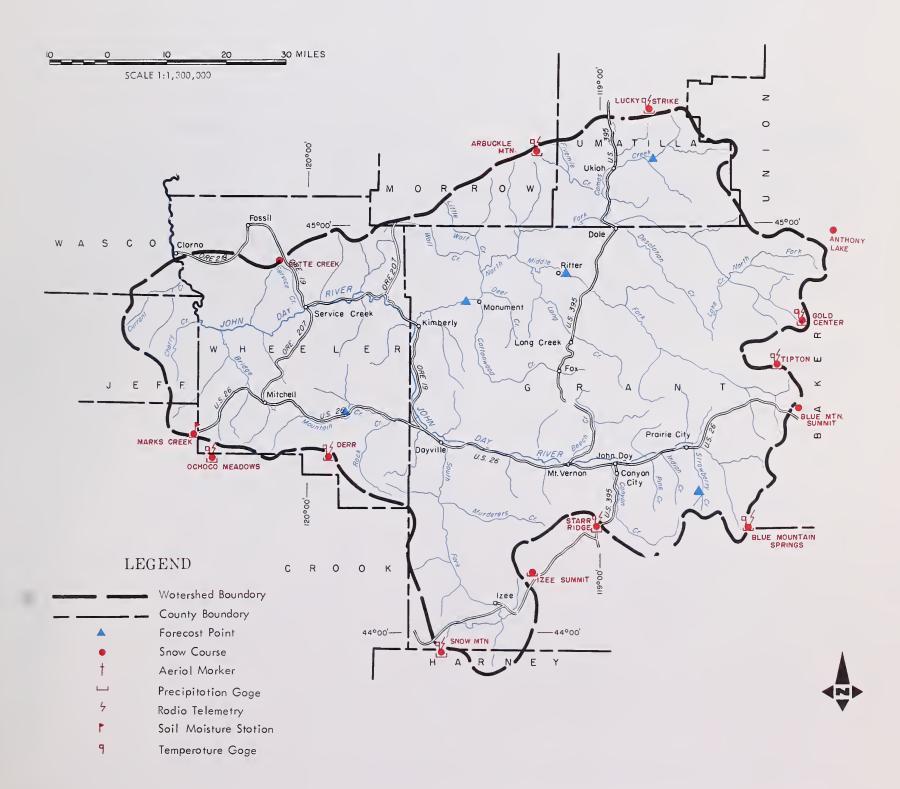
SUMMARY OF SNUW MEASUREMENTS

RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF			
SUB-WATERSHED	Averaged	Last Year	Average C		
McKay Creek Umatilla River Walla Walla River	3 3 2 2	52 58 66	91 92 90		

WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be near to above normal this summer. Precipitation was 62 percent of normal last month. It has been 86 percent for the winter season. The snowpack didn't increase as much as usual during January. The current snowpack is about 115 percent of normal.



STREAMFLOW FORECASTS		THIS YEAR	PAST RECORD		
		CAST	FORECAST	THOUSAND ACRE FEE	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average ^C
Camas Creek near Ukiah John Day River, Middle Fork at Ritter John Day River, No. Fk. at Monument Mountain Creek near Mitchell Strawberry Creek near Prairie City	47 38 145 123 703 595 5.5 7.7 8.1	112 115 109 109 110 110 120 105 105	March-July April-Sep. March-July April-Sep. March-July April-Sep. FebJuly March-July April-Sep.		42 34 133 108 639 541 4.6 7.3 7.1

FORECAST DATE of LOW FLOW VALUES

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

Forecast Date Stream Will Recede to Low Flow Value THIS YEAR'S SNOW WATER AS PERCENT OF Low Flow Value Second/Ft. RIVER BASIN Number of Courses Averaged FORECAST POINT and/or SUB-WATERSHED Last Year Average C John Day at Service Cr. 212 Avg.value 212 Aug. 1 7 John Day, North Fork 77 114 John Day, abv. Dayville 5 76 117

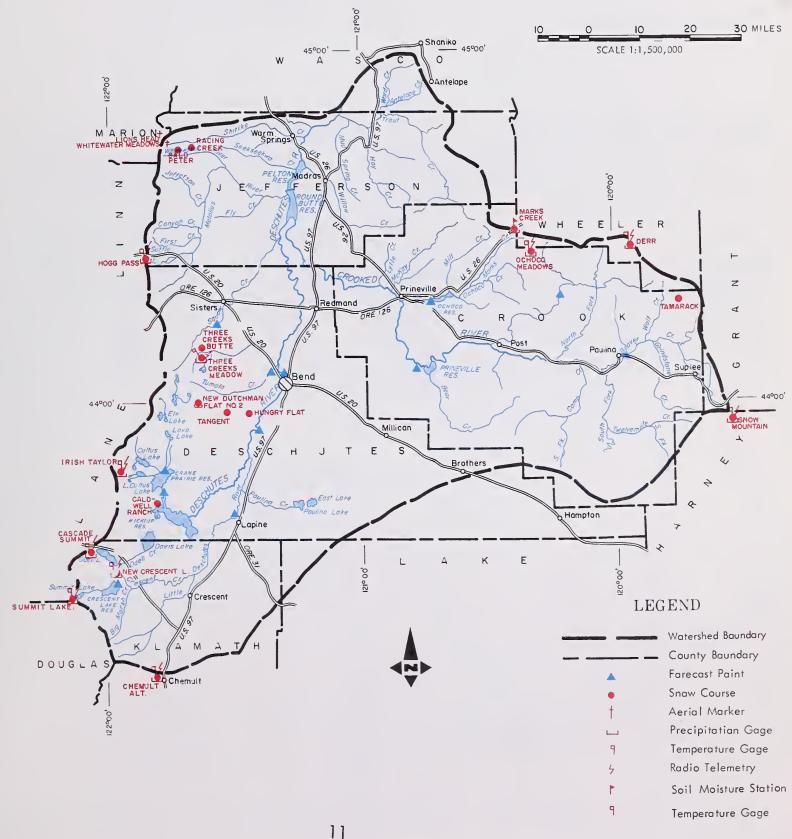
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UPPER DESCHUTES, CROOKED WATERSHEDS **OREGON**

GENERAL OUTLOOK

Water supplies will be adequate for all users. Streamflow will be above normal for the Deschutes River and much above normal for the Crooked River. The mountain snowpack did not receive the normal January increase. It ranges from 93 percent of normal on the Deschutes above Wickiup to 133 percent on the Crooked River drainage. January precipitation was 66 percent of normal and for the winter season to date it has been 91 percent. Current reservoir storage is 110 percent of the February first average.



STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD	
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feer	Percent of Average	PERIOD	Last Year	Average C	
Beaver Creek near Paulina	58	150	FebJuly		39	
beaver creek near raurina	23	145	April-Sept.		16.1	
Crane Prairie Reservoir total Inflow	133	112	April-Sept.		120	
Crescent Cr. at Crescent Lake, near Crescent	24	120	March-July		20	
or additional and or additional and or additional and and additional additional and additional addit	26	120	April-Sept.		22	
Crooked River near Prineville	241	150	FebJuly		161	
	126	140	April-Sept.		90	
Crooked R., No. Fk.blw. Lookout Cr. nr. Paulina	20	140	Feb. July		14.5b	
Deschutes River below Bend		CAST THIS				
Deschutes River at Benham Falls, near Bend	395	107	April-July		368	
	592	106	April-Sept.		560	
Deschutes River blw. Snow Creek, near La Pine	85	112	FebSept.		75	
	71	112	April-Sept.		63	
Deschutes River, Little near La Pine	116	113	Feb. July		102	
	82	111	April-July		74 29	
Ochoco Reservoir net Inflow	43	150	FebJuly		16	
	22	140	April-Sept.		49	
Squaw Creek near Sisters	51 50	105	April-Sept.		45	
Tumalo Creek near Bend	50	110	April-Sept.		73	

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow Crooked R. near Post Deschutes below Bend Little Deschutes near La Pine Squaw Cr. near Sisters Tumalo Cr. near Bend	400 200	Peak Oct. 31 May 24 May 31 ECASTED THI June 7 July 8 Aug. 12 July 7 July 9 July 29 Aug. 6	June 1 S MONTH June 7 July 8 Aug. 16 June 23 June 25 July 5 Aug. 7

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

	MESERADIK SIOKAGE (1	iiousaiiu i	46. I L.	END OF M	ION I H	
]	DESERVOIR	Usable	U	sable Stora	ge	
	RESERVOIR	Capacity	This Year	Last Year	Average ^C	
	Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	42.6 63.8 31.6 94.5 194.1	32.1 26.8 28.6 93.1 136.8	44.9 61.4 26.0 101.1 156.4	

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

(COMPARISON WITH PREVIOUS TEARS)									
RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF							
SUB-WATERSHED	Averaged	Last Year	Average C						
Crooked, Ochoco Deschutes abv. Wickiup Little Deschutes Tumalo & Squaw Creeks	4 3 4 3	77 66 71 66	133 93 99 104						

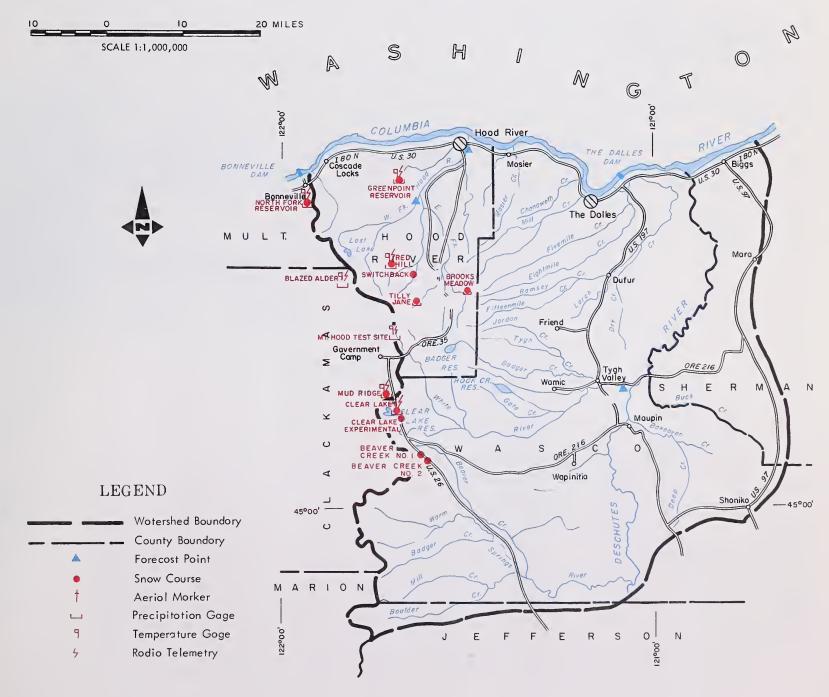
⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

GENERAL OUTLOOK

Water supplies will be near average for the Hood River while it will be below average for the White River (82 percent). The area's precipitation was 100 percent of normal for January. However, the mountain snowpack did not increase as much as usual for the month. The snowpack is currently at 71 percent of normal.



STREAMFLOW FORECASTS		THIS YEAR	PAST RECORD		
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Hood River at Tucker Bridge near Hood River Hood River, West Fork near Dee White River Below Tygh Valley	218 260 127 149 94 108	90 90 100 100 82 84	April-July April-Sept. April-July April-Sept. April-July April-July		242 289 127 149 114 129

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

FORECAST POINT	Low Flow	Ju Count Hill	Average Date	RESERVOIR	Usable _		Usable Sto	rage
FUNECASI FUINI	Value Second/Ft.	Recede to Low Flow Value	of Low Flow Value	RESERVOIR	Capacity	This Year	Last Year	Average ^C
Clear Branch Inflow	*38	July 15-31	**39	Clear Lake (Wasco)	11.9	4.9	1.5	3.9
*Average cfs forecast to flow for this two-week period.								
**Average cfs for period of record								
White Blw. Tygh Valley	200	June 28	July 3					
	137	Aug. 1	Avg.value 145					
				SUMMARY OF SNOW ME		NTS		1
				RIVER BASIN and/or	Number Course	s W		R'S SNOW PERCENT OF
				SUB-WATERSHED	Average	ed La	ist Year	Average 0
				Hood River	5		53	71
				Mile Creeks	_			
				 White River	3		53	73

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies will be near normal for the Columbia River and below normal for the Sandy River. Snowpack in the upper reaches of the Columbia River basin is 96 percent of average, while for the Sandy it is 75 percent. January precipitation was 81 percent of normal for the Columbia drainage and 90 percent for the winter season.



SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average C
Sandy River	2	55	75

STREAMFLOW FORECASTS		THIS YEA	R	PAST	RECORD
	FORE	ECAST	FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Columbia River at The Dalles	86,000 101,000	97 98	April-July April-Sept.		88,520 103,500
Sandy River near Marmot	266 314	81 82	April-July April-Sept.		329 384
Sandy Kiver near marinot					

HISTORICAL DATA (Columbia River at The Dalles)

VEAD		STREAMFLOW d(1,000 A F.)	REGULATED PEAK	5.475	
YEAR	APR - SEPT.	APR — JUNE	MAY - JUNE	(1,000 c.fs)	DATE	
1963 1964 1965 1966 1967 1968	87,860 110,422 114,222 87,386 109,319 89,102	58,499 73,512 80,098 58,250 74,378 55,593	47,812 63,670 62,467 45,962 66,452 47,994	437 662 520 396 622 404	June 18 June 18 June 9 June 12 June 10 June 13	
1969 1970 1971 1972 1973 1974	112,377 88,243 126,898 135,500 65,549 139,501	85,742 62,993 91,781 97,041 43,765 99,035	63,899 55,227 76,453 81,451 36,565 78,946	515 425 557 619 221 588	May 15 May 28 May 13 June 20 December 5 June 20	
1975 1976 1977 1963-77 Avg.	108,906 122,771 54,108	73,018 79,084 35,505 71,220	62,861 62,554 28,394 58,714	422 418 213 468	May 17 May 14 January 25	

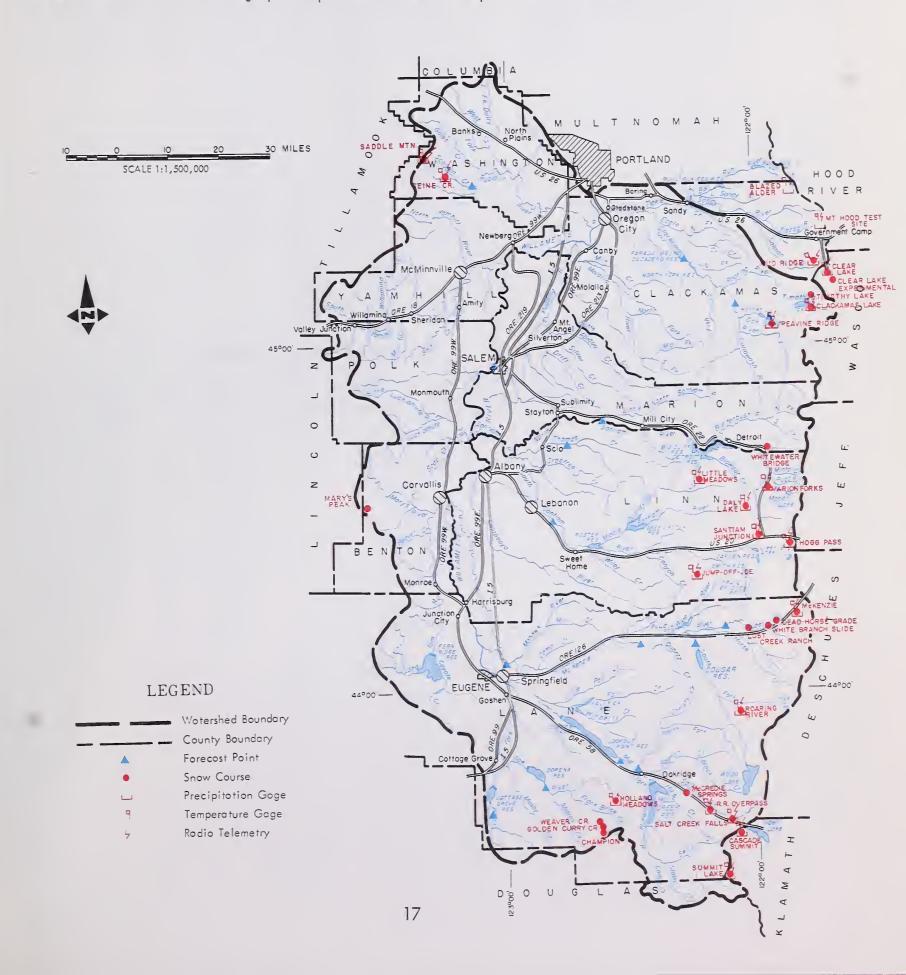
LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

				DRAINA	GE DISTRICT PUM	PHOUSE			
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON	
GAGE (Weother Bu)	THE DALLES		RIVER MILES						
(Weomer Bu)	(1,000 c.f.s)	118.9	96.0	91.0	77.0	62.0	52.0	47. 0	
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5	
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0	
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3	
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7	
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0	
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4	
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8	
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4	
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0	
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7	
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3	
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2	
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0	
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7	
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6	
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4	
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3	
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1	
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9	
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7	

WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies will be near normal to slightly below normal for most of the area. Mountain snowpack is much below to below average. It ranges from 57 percent of average on the McKenzie to 85 percent on the Middle Fork of the Willamette. January precipitation was 85 percent of normal.



STREAMFLOW FORECASTS 8		THIS YEAR	3	PAST	RECORD
	FORECAST		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average (
Clastrone Divon at Fatacada	600	00	America de la la la companya de la c		667
Clackamas River at Estacada	600 704	90	April-July April-Sept.		667 782
Clackamas River abv. Three Lynx Creek	465	90	April-July		506
orackallas Kryer aby. Tillee Lynx oreck	556	91	April-Sept.		603
McKenzie River at McKenzie Bridge	422	93	April-July		452
•	563	94	April-Sept.		598
McKenzie River near Vida	947	92	April-July		1,024
	1,170	93	April-Sept.		1,259
McKenzie R., So. Fk. Abv. Cougar L., nr. Rainbow		91	April-July		207
	217	93	April-Sept.		234
Mohawk River near Springfield	166	100	FebJuly		166
Dak Grove Fork above Powerplant Intake	119 151	90	April-July April-Sept.		132 168
Row River above Pitcher Creek near Dorena	92	94	April-Sept.		98
Now Kiver above riccher creek hear borena	97	94	April-Sury		104
Santiam River, North at Mehama	656	87	April-July		752
Sanotam Hittory Horon as Heriama	762	89	April-Sept.		860
Santiam River, South at Waterloo	492	90	April-July		547
·	531	90	April-Sept.		590
Scoggins Cr. Abv. Henry Hagg Lake near Gaston	41	94	FebJuly		44
Thomas Creek near Scio	154	96	FebJuly		160
Willamette River, Coast Fork at London	30	111	April-July		27
Willamette, Mid. Fk. Blw. N. Fk. near Oakridge	644	96	April-July		678
Hillmaths No Ele of Mid Ele many Osignidas	739	96	April-Sept.		776 188
Willamette, No. Fk. of Mid Fk. near Oakridge	188 214	100	April-July April-Sept.		209
Willamette River at Salem	4,254	91	April-Sept.		4,697
TITIANICO CONTROL ACCOUNTENT	1,201				,,,,,,

SUMMARY of SNOW MEASUREMENTS

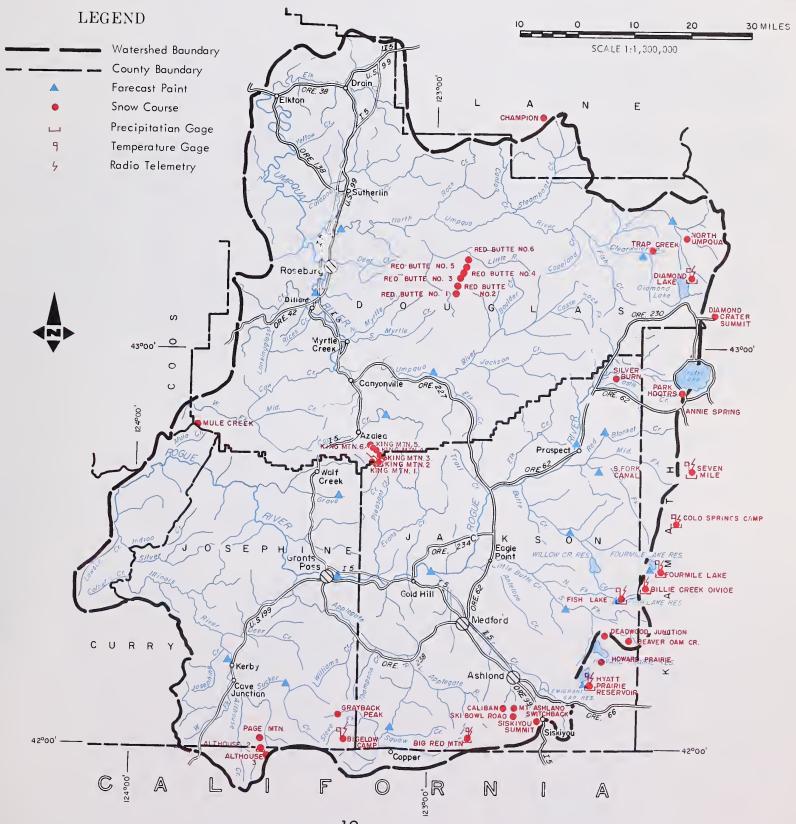
(COMPARISON WITH PREVIOUS YE RIVER BASIN	Number of		WATER AS PERCENT OF SECRICOR Usable L		WATER AS DESCRIPTION LISTING		Usable Storage		
and/or SUB-WATERSHED	Courses Averaged	Last Year	Average C	* RESERVOIR	Capacity	This Year	Last Year	Average C	
Clackamas River McKenzie River Row River Santiam River Willamette, Mid. Fk.	2 3 2 4 4	 43 64 44 63	68 57 80 61 85	Blue River Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake Henry Hagg Lake * Multiple purpose reservoirspace reserved primarily for flood runoff.	85.6* 30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 30.0* 270.0* 200.0* 337.2* 61.7 53.0	2.2 0.3 8.1 20.1 1.1 1.2 5.2 0.4 21.3 20.4 24.8 57.9 31.9	5.1 1.2 11.6 31.0 8.6 13.5 19.8 1.4 55.2 22.3 43.9 56.1 39.6	15.1b 3.1 16.1 59.2 13.6 15.0b 22.9 1.2b 51.4b 34.7 59.7 53.7	

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

GENERAL OUTLOOK

Above normal water supplies are forecast for most of the area this summer. The Umpqua River is an exception to this since it is forecast to flow at 87 to 99 percent of average. January precipitation in the Rogue and Umpqua basins was only 62 percent of normal. This resulted in the snowpack not increasing as much as usual for January. The snowpack is still above average except for the North Umpqua which is only 80 percent of average. The other basins range from 112 to 184 percent of average.



STREAMFLOW FORECASTS		THIS YEAR		PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Applegate River near Copper	161	125	April-Sept.		129
Big Butte Cr., So. Fk. near Butte Falls	38	105	April-July		37
Clearwater River abv.Trap Cr.,nr. Toketee Falls	71	100	April-Sept.		71
Cow Creek near Azalea	44	101	FebJuly		43
Fourmile Lake net Inflow	5.7	146	April-Sept.		3.9
Grave Creek at Pease Bridge near Placer	19.4	94	FebJuly		21
Hyatt Reservoir net Inflow	6.7	136	April-July		4.9
Illinois River near Kerby	195	111	April-July		176
	201	110	April-Sept.		183
Little Butte Cr., N.Fk. at Fish Lk. nr. Lakecree	k 16.1	115	April-Sept.		14.0
Little Butte Creek, S. Fork near Lakecreek	39	115	April-July		34
Red Blanket Creek near Prospect	38	108	.April-July		35
Rogue River above Prospect	270	105	April-July		257
Rogue River, So. Fork near Prospect	65	105	April-July		62
	78	105	April-Sept.		74
Rogue River at Raygold near Central Point	816	108	April-July		756
	992	108	April-Sept.		919
Rogue River at Grants Pass	810	106	April-July		759
	948	104	April-Sept.		908
Sucker Cr.blw. Little Grayback Cr. near Holland		125	April-Sept.		58
Umpqua R., No.blw. Lemolo Lake, nr Toketee Falls		94	April-Sept.		170
Umpqua River, North at Winchester	720	94	April-July		768
Umpqua River, So. near Brockway	331	87	April-July		380
Umpqua River, South at Tiller	182	99	April-July		183

FORECAST DATE of LOW FLOW VALUES

TONEONST DATE OF LOW	ILUM TAL	OLO	
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Cow Creek near Azalea	20 10	July 4 Aug. 19	July 4 Aug. 19
Little Butte Creek, South Fork	100	May 22	May 15
South Umpqua, near Brockway	90	Aug. 11	July 30
South Umpqua at Tiller	140 90 60	July 8 July 27 Aug. 22	July 10 July 30 Aug. 27

RESERVOIR STORAGE (Thousand Ac Et) SUB OF MONTH

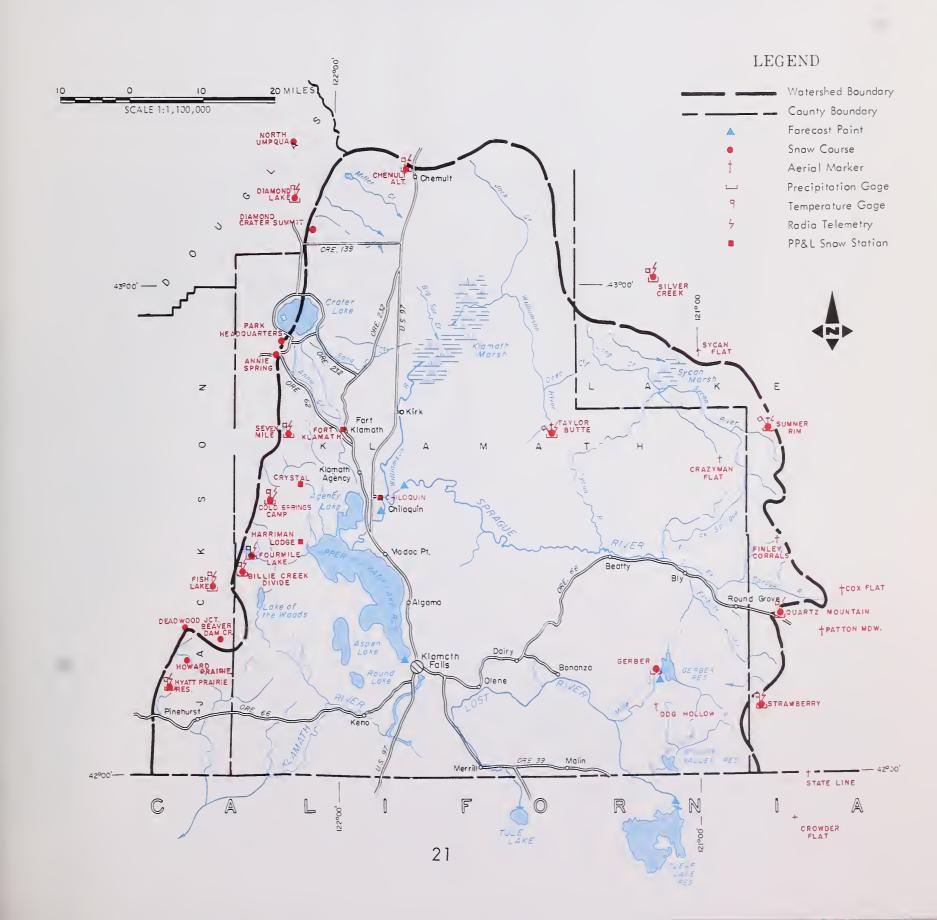
MESERVUIR STURAGE (iiousaiiu	AU. FL.	ENDOF	MONTH
DECEDVOID	Usable	U	sable Stora	ge
RESERVOIR	Capacity	This Year	Last Year	Average ^C
Applegate Emigrant Lake Fish Lake Fourmile Lake Howard Prairie Hyatt Prairie Lost Creek	75.2 39.0 8.0 16.1 60.0 16.1 315	11.9 24.9 6.2 8.7 46.2 13.0 169.0	10.7 25.1 3.8 5.3 45.4 12.6 166.5	24.4 5.9 9.9b 44.5 11.8

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YE	ARS)		
RIVER BASIN	Number of		AR'S SNOW
and/or	Courses		PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average C
Applegate Bear Creek Butte Creek Illinois River North Umpqua Rogue River Mt. Ashland	2	173	184
	2	105	120
	4	120	141
	3	138	130
	3	60	80
	4	82	112
	5	108	134

GENERAL OUTLOOK

Water supplies are forecast to be very good this summer. Streamflow will be from 110 percent to 131 percent of normal. Current reservoir storage is 110 percent of average for this time of year. Since the precipitation was only 59 percent of normal for January, the snowpack didn't increase as much as usual during the month. However, the snowpack is still above average throughout Klamath County.



RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable	U	sable Stora	ge
RESERVOIR	Capacity	This Year	Last Year	Average C
Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	306.8 72.8 342.3	185.9 48.9 377.2	235.2 50.6 372.6

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

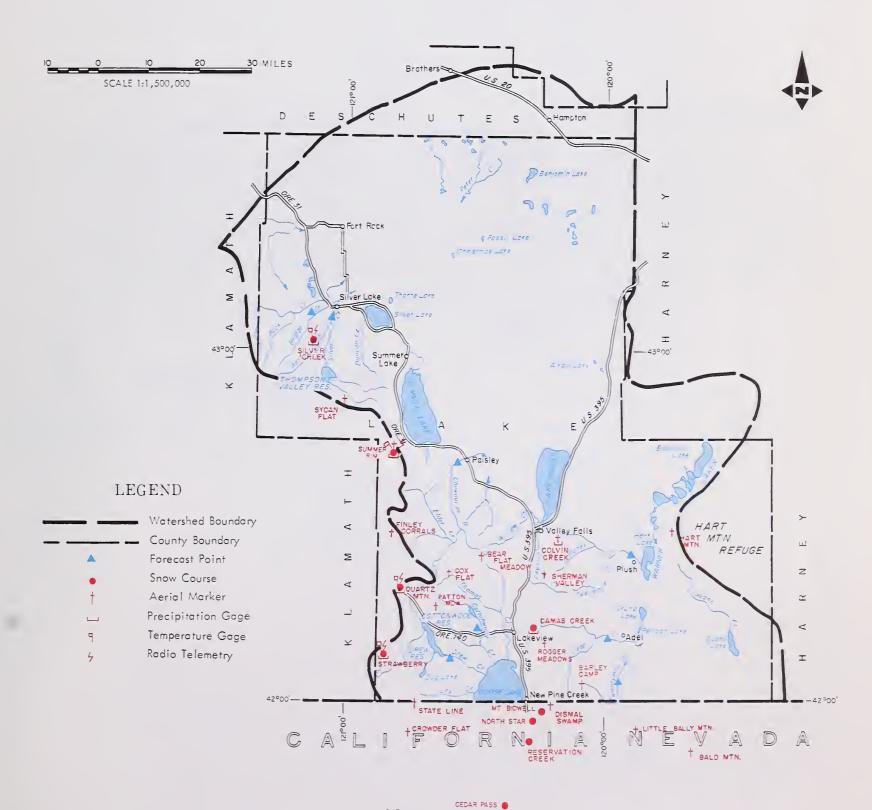
RIVER BASIN	Number of		AR'S SNOW
and/or	Courses		PERCENT OF
SUB-WATERSHED	Averaged		Average C
SUB-WATERSHED		Last Year	Average
Lost River	4	106	117
Sprague River	2	142	165
Upper Klamath	5	94	126
Williamson River	3	67	119

WATER SUPPLY OUTLOOK

LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

GENERAL OUTLOOK

Lake County water supplies will be very good this spring and summer. Streamflow will range from 120 percent to 140 percent of average throughout the county. Storage of three principle irrigation reservoirs is 113 percent of average for this time of year. Precipitation for the season is currently at 95 percent of average, but was only 39 percent of average for January. Because of this, the January snowpack increase was less than usual. However, the snowpack is still very good with a range of 128 to 183 percent of average.



ADIN MTN

STREAMFLOW FORECASTS	TODICAST THOUSAND AG	RECORD			
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average C
Bridge Cr. at Sphar Ranch near Silver Lake Chewaucan River near Paisley Cottonwood Creek near Lakeview Deep Creek above Adel Drews Reservoir net Inflow Honey Creek near Plush Silver Creek near Silver Lake Twentymile Creek near Adel	4.8 * 116	140 131 135 120 137 140 126 138	April-July March-July March-July March-July March-July March-July April-July		3.4 88 11.6 80 41 21 14.1 26

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

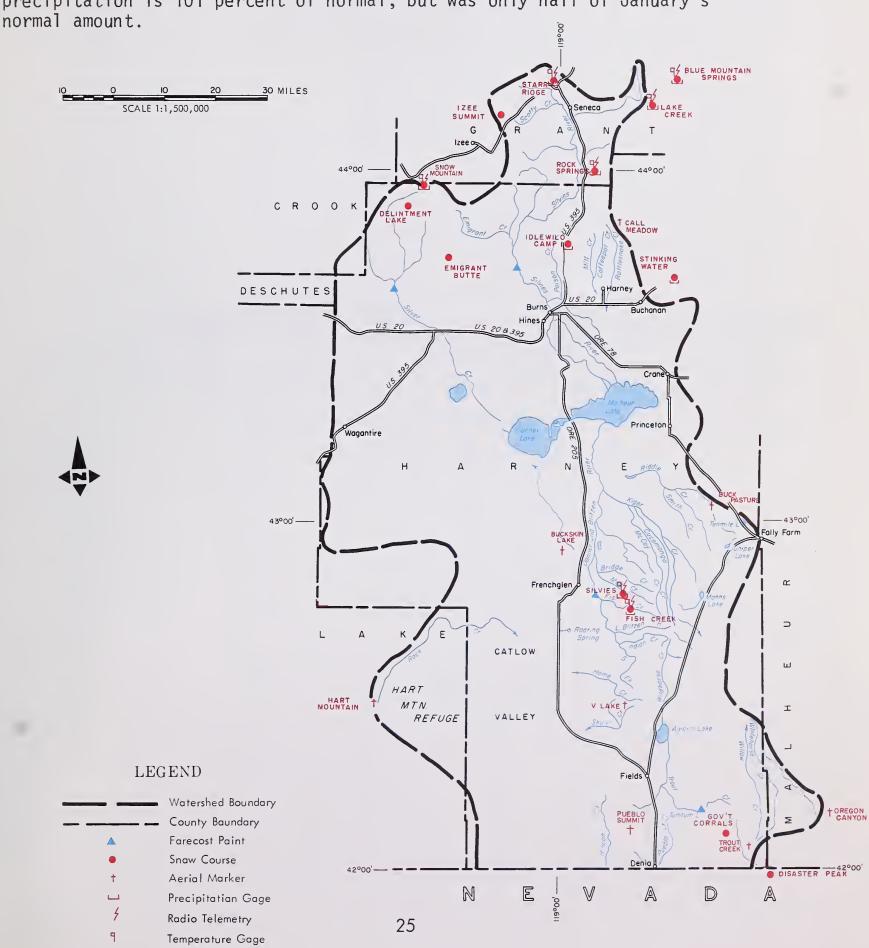
FORECAST POINT	Low Flow Value	1 Jucam Will	Average Date of Low Flow	RESERVOIR	Usable		Usable Stora	age
	Second/Ft.	Recede to Low Flow Value	Value	RESERVOIR	Capacity	This Year	Last Year	Average ^C
Deep Creek above Adel	100	June 27	June 21	Cottonwood	8.7	3.7	7 8.0	2.8b
Honey Creek near Plush	100 50	June 27 July 9	May 15 May 30	Drews	63.0	43.3	3 48.5	39.3
Twentymile near Adel	50 10	June 19 July 20	June 2 July 3	Thompson	19.5	16.4	4	14.05
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOU	S YEARS)	IENTS	THIS YEAR	R'S SNOW
				RIVER BASIN and/or SUB-WATERSHED	Cou	rses	WATER AS PE	Average C
				Chewaucan River Deep Creek Drew Creek Honey Creek Silver Creek Twentymile Creek		2 4 2 3 3 3 3 3 3	142 107 154 140 103 121	165 128 153 180 138 183

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

GENERAL OUTLOOK

Water supplies are forecast to be very good for Harney County this summer. Streamflow will range from 123 to 134 percent of normal. The snowpack is still very good with a low of 113 percent of average for Silver Creek and as much as 152 percent for the Donner und Blitzen River. Seasonal precipitation is 101 percent of normal, but was only half of January's



TREAMFLOW FORECASTS 12		THIS YEA	R	PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average (
Donner und Blitzen River near Frenchglen Silver Creek near Riley Silvies River near Burns	74 70 20	126 123 130	March-July April-Sept. April-July		59 57 15.8
Trout Creek near Denio, Nevada	101 12.0	130 129	April-Sept. March-July		77 9.3

FORECAST DATE of LOW FLOW VALUES

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

Forecast Date Stream Will Recede to Low Flow Value THIS YEAR'S SNOW WATER AS PERCENT OF Low Flow Value Second/Ft. Average Date of Low Flow Value RIVER BASIN Number of Courses Averaged FORECAST POINT and/or SUB-WATERSHED Last Year Average C Silvies near Burns 400 May 8 May 5 Donner und Blitzen-R. 3 86 152 200 June 4 May 21 100 June 19 June 9 Silver Creek 2 78 113 50 June 26 June 23 Silvies River 4 79 129 200 Donner und Blitzen June 28 June 15 100 July 18 July5 Trout Creek ______ GAGE SURFACE AVG. HEIGHT **ACRES** SURFACE **ACRES** Malheur Lake at Break in Cole Island Dike near Voltage July 1 4095.47 74,500 40,000 Aug. 1 4094.97 67,300 33,000

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WOW
RAINAGE BASIN and/or SNOW COURS

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1 FEBRUARY 1, 1983

DRAINAGE BASIN and/or SNOW COURSE Det Survey Det Control (Inches) Control (In
DESCHUTES WATERSHEDS AREA 6
Mud Ridge Pillow (M)

THIS YEAR	SNOW	PAST RECORD	R	HIS YEAR	Т	SNOW
Date Snaw Water Gart. Survey (In.)	DRAINAGE BASIN and/ar SNOW COURSE	Water Cantent (Inches) Last Yr. Ave. C	Woter Cont. (in.)	Snow Depth (In.)	Date of Survey	DRAINAGE BASIN and/or SNOW COURSE
Date of Snow Depth Cant. (In.) 2/4 97 36.6 2/3 52 19.5 2/2 18.3 2/1 38 12.3 2/1 38 12.3 2/1 31 11.4 2/1 7.8 2/2 28.0 2/3 64 21.6 2/3 26.4 1/28 30 9.0 2/1 11 5.0 2/3 26.4 1/28 30 9.0 2/1 11 5.0 2/3 26.4 1/28 48 15.4 2/1 8 4.0 2/3 55 19.9 2/2 23.1 2/3 76 21.7 2/3 76 21.7 2/3 76 21.7 2/1 TR 1/31 32 12.1 1/31 26 11.2 1/31 32 12.1 1/31 26 11.2 1/31 129 48.1 1/31 129 48.1 1/31 129 48.1 1/31 129 11.4 N/R 1/31 129 48.1 1/31 129 48.1 1/31 26 11.2 1/31 129 48.1 1/31 26 11.2 1/31 27 11.6 1/26 29 8.0 1/27 9.9 N/R		Water Cantent (Inches) Last Yr. Ave. c	5.0 16.0 36.6 16.5 19.8 20.8 19.0 37.2 33.2 1.28.5 19.5 18.3 20.4 18.0 29.3 7.2 27.5 28.0 21.6 26.4 10.7 25.6 21.6 14.5 13.0 12.6 11.8 12.0 11.4 11.3 7.3 5.6 3.9 3.9 0.0 0.0 0.0 28.3 0.0	Snow Depth	1/26 1/26 2/4 1/31 2/1 2/2 2/2 2/2 2/2 2/3 2/2 2/3 1/27 2/2 2/3 1/31	

PRECIPITATION (Inches)		CURRENT IN	FORMATION	PAST R	ECORD	
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average	
Arbuckle Mountain (Morrow County)	5400	From 12/29 To 1/25	3.95"			
Beaver Reservoir (Union County)	5150	From 12/28 To 1/27	3.12"			
Bigelow Camp (Josephine County)	5120	From 9/28 To 2/2	47.16"			
Big Red Mountain (Jackson County)	6250	From 9/28 To 2/2	40.44"			
Billie Creek Divide (Jackson County)	5310	From 12/30 To 2/3	6.24"			
Blue Mountain Springs (Grant County)	5900	From 12/29 To 1/25				
Bourne (Baker County)	5800	From 9/29 17.28" To 1/28				
Cascade Summit (Lane County)	4880	From 12/29 To 1/27	8.16"			
Chemult (Klamath County)	4760	From 1/3 To 2/1	3.24"			
Cold Springs (Klamath County)	6100	From 9/28 To 2/3	33.20"			
County Line (Umatilla County)	4800	From 12/29 To 1/25	1.80"			
Derr (Wheeler County)	5670	From 10/1 To 1/25	15.36"			
Diamond Lake (Douglas County)	4600	From 9/27 To 1/25	24.00"			
Eilertson Meadows (Baker County)	5 400	From 12/28 To 1/28	3.72"			
Fish Creek (Harney County)	7900	From 9/29 To 1/28	23.04"			
Fish Lake (Jackson County)	4665	From 12/30 To 2/3	4.08"	:		
Fourmile Lake (Klamath County)	6000	From 12/29 To 2/3	6.12"			
Gold Center (Grant County)	5340	From 12/28 To 1/28	3.00"			
Greenpoint (Hood River County)	3200	From 9/16 To 1/30	50.76"			
High Ridge (Umatilla County)	4150	From 1/3 To 1/28	8.16"			
Hogg Pass (Jefferson County)	4755	From 12/28 To 1/26	11.52"			
Hyatt Prairie (Jackson County)	4900	From 1/4 To 1/31	3.36"			
Irish-Taylor (Deschutes County)	5500	From 9/29 To 1/28	34.68"			

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2 FEBRUARY 1, 1983

RECIPITATION (Inches)		CURRENT IN	FORMATION Y	PAST RECORD		
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average	
Jump Off Joe (Linn County)	3400	From 12/30 To 1/26	11.52"			
King Mountain #2 (Douglas County)	4500	From 12/28 To 1/26	6.84"			
Lake Creek (Grant County)	5120	From 9/27 To 1/25	13.92"			
Lucky Strike (Umatilla County)	5050	From 12/29 To 1/25	2.25"			
Madison Butte (Morrow County)	5250	From 12/29 To 1/25	1.68"			
Marion Forks (Linn County)	2730	From 12/28 To 1/26	13.08"			
McKenzie (Lane County)	5000	From 9/28 To 1/28	53.64"			
Moss Springs (Union County)	5850	From 10/6 To 1/28	20.52"			
Mt. Hood Test Site (Clackamas County)	5400	From 12/28 To 1/27	4.44"			
Mt. Howard (Wallowa County)	7910	From 9/24 To 1/28	21.48"			
Mud Ridge (Clackamas County)	4050	From 9/24 To 1/31	36.24"			
New Crescent Lake (Klamath County)	4800	From 9/30 To 1/27	15.12"			
Ochoco Meadows (Crook County)	5200	From 10/1 To 1/24	14.28"			
Quartz Mountain (Lake County)	6300	From 9/30 To 1/27	13.32"			
Railroad Overpass (Lane County)	2750	From 12/29 To 1/27	5.76"			
Red Hill (Hood River County)	4400	From 10/7 To 1/28	59.69"			
Rock Springs (Grant County)	5100	From 12/29 To 1/26	1.44"			
Salt Creek Falls (Lane County)	4000	From 12/29 To 1/27	7.20"			
Santiam Junction (Lane County)	3750	From 12/28 To 1/26	4.56"			
Schneider Meadows (Baker County)	5400	From 10/1 To 1/28	22.08"			
Silver Creek (Lake County)	5720	From 12/30 To 2/3	1.80"			
Snow Mountain (Harney County)	6220	From 9/29 To 1/27	14.25"			
Starr Ridge (Grant County)	5156	From 1/3 To 1/25	2.40"			

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2 FEBRUARY 1, 1983

RECIPITATION (Inches)		CURRENT IN	FORMATION	PAST R	ECORD
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average
Strawberry (Lake County)	5760	From 9/30 Tc 1/25	11.16"		
summit Lake (Klamath County)	5600	From 9/30 To 1/27	35.88"		
aylor Butte (Klamath County)	5040	From 12/29 To 1/24	1.08"		
aylor Green (Baker County)	5740	From 10/1 To 1/28	19.08"		
nree Creek Meadows (Deschutes County)	5650	From 9/29 To 1/31	24.48"		
ipton (Baker County)	5100	From 12/28 To 1/28	3.24"		
olf Creek (Union County)	5720	From 12/28 To 1/28	3.84"		
•					

⁽a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

	NAME .											
	NUMBER NAME LOCATION ELEV NUMBER	NAME LOCATION ELEV	NUMBER NAME LOCATION ELEV	NUMBER	NAME LOCATION ELEV	NUMBER	NAME LOCATION ELEV	NUMBER	NAME LOCATION	ELEA WWREB	es Abra.	LOCATION FLEY
	OWYHEE, MALHEUR WATERSHEDS 16H3AP 18G7P 1766a 16G6 Antelope Ridge (Ida) 20 85 1E 5900 16G11a	Mud Flat (Ida) 34 9S 2H 5500 Oregon Canyon 8 40S 40E 6950 Quinn Ridge (Nev) 9 47N 41E 6300	18E20 Eldorado Pass 20 14S 38E 4600 18E26a Flag Prairie 32 16S 36E 4750 18E18 * Lake Creek 10 16S 33½E 5200 18F1 * Rock Spring 23 18S 32E 5100	1707P * Taylor 17017 West E	Antone 1 75 37E 5000 Green 3 65 42E 5740 agle Meadows 32 55 43E 5500	1902P * 18E1P	Willow Creek Arbuckle Mountain 33 45 29E 5400 Anthony Lake 18 75 37E 7125	21E6 * 22E7 * 22E9* 21E4*	Hogg Pass 24 135 77E Jump-Off-Joe 1 145 5E Little Meadows 17 115 5E Marion Forks 29 115 7E	3400 20G14a 4000 22G12 * 2600 21G4P		1 40S 14E 4900 11 36S 16E 6000 9 36S 5E 6000 12 39S 13E 4850
	1669a Battle Creek (Ida) 10 11s 1E 5700 15H6P 15HIA Bear Creek (Nev) 31 46N 58E 7800 15H3A 15H4P Big Bend (Nev) 30 45N 56E 6700 16F3AP* 18E35a Boulder Creek 35 13S 38E 5690 18G1PA*	Rodeo Flat (Nev) 36 43N 53E 6800 76 Creek (Nev) 6 44N 58E 7100 Silver City (1da) 6 5S 3H 6400	18F4P Stinking Water 34 21S 34E 4800	18021 * Wolf 0	Pine Creek 2 6S 37E 5700 Pine Creek 35 6S 45E 5400		UPPER JOHN DAY WATERSHEDS 141	21ES* 21E3	Santiam Junction 14 13S 7E Whitewater Bridge 20 10S 7E	3750 22626	Howard Prairie Hyatt Prairie Reservoir Park Neadquarters	32 38S 4E 4500 15 39S 3E 4900 8 31S 6E 6550 2 38S 16E 5320
	17H2 8uckskin, Lower (Nev) 25 45H 39E 6700 16G1p 17H1 8uckskin, Upper (Nev) 11 45N 39E 7200 15H19a 16610a 8ull 8asin (Ida) 29 12S 5N 5600 16F06a	South Mountain No.2(Ida) 10 85 5W 6340 Stag Mountain (Nev) 32 41N 58E 7800 Succor Creek (1da) 36 3S 5W 6320	BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS 121	G	Grande Ronde River	1902P *	Upper John Doy River Arbuckle Nountain 33 45 29E 5400	21E8 22E4	McKenzie River Oead Horse Grade 13 16S 7E Lost Creek Ranch 19 16S 7E	3700 20Hla 1956 20G9P	Seven Mile State Line (Cal) Strawberry	20 335 6E \$725 21 480 11E 5750 4 40\$ 16E 5760
	18H1 Oisaster Peak (Nev) 8 47H 34E 6500 16H7a 16H8a Fawn Creek (Nev) 2 4SN 52E 7000 15H8 18G2PA* Fish Creek 4 33S 33E 7900 18G5a	Taylor Canyon (Nev) 35 39N 53E 6200 Toe Jam (Nev) 29 40N 50E 7700 Tremewan Ranch (Nev) 9 39N 55E 5700 Trout Creek 10 415 36E 7800	Surnt River	18E1P Anthon 17010a 8a1d M 1809 * 8eaver	d Lake No. 2 16 4S 4SE 7300 yy Lake 18 7S 37E 712S Nountain 14 & 15 4S 4IE 6700 Reservoir 8 5S 37E 5150	18E16P * 18E13 20E4 19E3P *	8 lue Mountain Springs 21 155 35E 5900 8 lue Mountain Summit 6 125 36E 5098 8 utte Creek Summit 5 85 22E 3930 0err 14 13S 23E 5670	21E7* 21E9	McKenzie 34 155 74E White Branch Slide 15 165 7E	4800 20G2AF 2700 20G13a 21G3P	Sycan Flat	23 335 16E 7100 25 315 14E 5500 21 335 11E \$100
	15H2 Fox Creek (Nev 33 4oN 58E 6800 18G7a 15H7 Fry Canyon (Nev) 31 43N 54E 6700 16G12a 15H5 Gold Creek (Nev) 31 45N 56E 6600 16G13a 17H4 Granite Peak (Nev) 22 44N 39E 7800	"V" Lake 31 3545 3246 6600 Vaught Ranch (Ida) 10 115 14 5050	17ElP	1808P* County 1806P* Lucky 17013a Mirror 1706* Moss \$	Line	18E8 * 19E9P 1806P *	Gold Center 21 95 36E 5340 Izee Summit 28 16S 29E 5293 Lucky Strike 28 3S 32E 5050	22F3* 22F6	Middle Fork Willomette River Cascade Summit 7 238 6E McCredie Springs 36 218 4E		ic Power and Light Compar	ny's Snow Stations
	1665a Hyde Pasture (Ida) 31 85 2W 5800 16H1 Jack Creek, Lower (Nev) 18 42N 53E 6800 16H2A Jack Creek, Upper (Nev) 5 42N 53E 7250	Molheur River	18E9P • Tipton 34 10S 35E 5100 Powder River	17018* Ht. Ho 17011a Standl 1707P* Taylor	ward 27 3S 45E 7910 ey 21 2S 42E 7400 Green 3 6S 42E 5740	20E1P 20E2 * 19F1* 19E7 *	Marks Creek 25 125 19E 4540 Ochoco Meadows 21 13S 20E 5200 Snow Mountain 1 19S 26E 6220 Starr Ridge 20 15S 31E 5150	22F5* 22F40* 22F4* 22F14*	Railroad Overpass 21 22S 5E Roaring River 29 19S 6E Salt Creek Falls 32 22S 5½E Summit Lake 33 24S 5½E	2750 4900 3 4000 4	Chiloquin (PP&L) Crystal (PP&L) Fort Klamath (PP&L)	34 34S 7E 4187 26 34S 6E 4200 22 33S 7'-E 41S0
	16H4 Jack Peak (Nev) 28 42N 53E 8420 16F05A Johnston Pond (Ida) \$ 4S 4M 6700 16H5 Laurel Oraw (Nev) 20 45H 53E 6700 18E16P* 17G6a Lookout 8utte 2 40S 47E 5650 18F6a	81ue Mountain Springs 21 155 35E 5900 8uck Pasture 28 29S 35E 5300	18EIP Anthony Lake 18 7S 37E 7125 18E5* Bourne 33 85 37E 5800 17EIP Oooley Mountain 32 11S 40E 5430	17016a TV Rid	lge No. 2 12 25 43E 7000	18E9P *	Starr Ridge 20 15S 31E 5150 Tipton 34 10S 35 E 5100	\$\$F 4"	23 243 37c	8		3 36\$ 6E 4200
	1754a Louse Canyon 27 405 44E 6440 18E21a 17H3 Hartin Creek (Nev) 18 44H 40E 6700 18F7a 15H2Da Merritt Mountain (Nev) 10 46N 54E 7000	Bully Creek 11 17S 37E 5300 Call Meadows 29 20S 33E 5340	18E3 * Eilertson Meadows 18 85 38E 5400 18E8 * Gold Center 21 95 36E 5340 18E6A Goodrich Lake 4 95 38E 6775		Imnoho River		UPPER DESCHUTES, CROOKED WATERSHEDS 151		Coost Fork Willomette River		Goose Loke	
	Total Mention and the Company of the			1702P* Aneroi 17014a 8ig Sh	d Lake No. 2 16 4S 45E 7300 deep 33 4S 46E 6200	21E22 21F8	Upper Deschutes River Bald Peter 29 10S 9E 5400 Caldwell Ranch 30 21S 8E 4400	22F9 22F10 22F42*	Champion 12 23S 1E Golden Curry Creek 1 23S 1E Holland Meadows 16 22S 2E	3136 20G8P 4900 20G11A	Camas Creek Cox Flat	27 365 19E 5900 5 39S 21E 5720 16 37S 18E 5750
1	24 23 22				A, WALLA WALLA, WILLOW, ROCK, ER JOHN DAY WATERSHEDS 131	22F3 * 21F22 * 21E6 *	Cascade Summit 7 235 6E 4880 Chemult Alt. 21 275 8E 4760 Hogg Pass 24 135 7:E 4755	22F11	Weaver Creek 3\$ 225 1E Mory's River	2440 20H2a 20H3a 20G1 7a 20G6 P	Oismal Swamp (Cal) Patton Meadow	30 47N 11E 5200 31 48N 16E 7200 28 38S 18E 6800 2 38S 16E 5320
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	D 2301 2302 23034	Umgilla, Walla Walla, Willow, Rock,	Grande Ronde Imnoha	18019 * High R 1806P * Lucky	lidge 31 3N 38E 4980 Strike 28 3S 32E 50S0	210244	Crooked River		ROGUE, UMPOUA WATERSHEDS (9) Rogue River	20G15 20G18 20G11	ap Colvin Creek A Cox Flat	27 36\$ 19E 5900 12 36\$ 21E 665D 16 37\$ 18E \$750
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	1033 1034 1034 1034 1034 1034 1034 1034	Ploze Aood State Creeks	01700 1700 17014	18016 81ue M	lountain Camp 35 4N 37E 4300	19F.1* 19E4	Ochoco Meadows 21 13S 20E 5200 Snow Mountain: 1 19S 26E 6220 Tamarack 8 15S 25E 4800	22G6 22G28 23G1\$* 22G21P	Annie Spring 19 31S 60 Beaver Oam Creek 1 38S 4E Bigelow Camp 19 40S 5E * Big Red Mountain 31 40S 1W	510D 5120	Summer Lake	23 335 16E 7100
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	215 9210	221E15 21E13	10216 10216 10126		IO TELEMETRY		IIIIa Carlo Marta Carl	23G14 23G5 22G5 22G2	Mule Creek 8 32S 94 Page Mountain 5 41S 77 Park Headquarters 8 31S 66 Silver Burn 30 30S 46	4045 19616 6550 20610	Hart Mountain	1 365 25E 6350 15 37S 21E 6600
	Source Crown	Upper Deschules Crooked				2106P	Mile Creeks - Mosier Creek Brooks Headows 2 25 10E 4300	22G20 22G32 22G9	Silver Burn 30 305 44 Siskiyou Summit 17 405 26 Ski Bowl Road 22 405 18 South Fork Canal 12 33S 38	6000	Gvono Lake a Bald Mountain (Nev)	17 4SN 21E 6720
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926	22 FT 22 FEB 0 022 FT 22 FT 24 FEB 0 022 FT 24 F	Lake County, Goose Lake	(oPo 10705A			21022 21036 21037	Clear Lake Experimental 29 48 91 3500 Beaver Creek No. 1 25 58 9E 4250 Beaver Creek No. 2 25 58 9E 4250	22F18I 23G8 23G9 *	King Mountain No. 1 5 33S 41 King Mountain No. 2 4 33S 41	4500 19F3	Oelintment Lake Emigrant Butte	28 195 26E 5600 14 215 27E 5000 27 20S 31E 5200
)N-22(2254)	deglers	16730				LOWER COLUMBIA WATERSHEDS 171 8ull Run River	23G10 23G11 23G12	King Mountain No. 3 33 325 44 King Mountain No. 4 33 325 44 King Mountain No. 5 29 & 28 325 44 King Mountain No. 6 20 325 44	3049 1 2380 1 1820 1 19F1	Rock Spring Snow Mountain	28 16S 29E S293 23 18S 32E 5100 1 19S 26E 6220 20 15S 31E 5150
M7=(Rogue, Umpqua	20013	• 1861 Owyhee, Malheur (661 1665)			21033*	81azed Alder 5 2S 8E 3650 Sondy River	23G13 22F16 22F23 22F24	North Umpqua 19 265 61 Red Butte No. 1 36 275 21 Red Butte No. 2 30 275 11	4215 4560 4300		34 215 34E 4800
MI ACT	G Company of the state of the s	Klamoth 20018	y Bostn 1601 16012			21035* 21034* 2108*	Mud Ridge 1 4S 81≤E 3800 North Fork Reservoir 24 1N 6E 3120 Mt. Hood Test Site 7 3S 9E 5400	22F25 22F26 22F27	Red Butte No. 3 30 275 11 Red Butte No. 4 30 275 11 Red Butte No. 5 20 275 11	1 2500 1.9F6	Donner Und Blitze a Suck Pasture	28 29\$ 35E 5300
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-BON-BON-	2305 22015, 2503 22016, 2506	20019 20011A	18693 - 7 1864 1762 01766 11669 18659 01766 11	015920		21013*	Clockomos River Clackamas Lake 35 55 8% 8400 Clear Lake 29 45 9E 3500		KLAMATH WATERSHEDS 1101 Klamath River	1867	a "Y" Lake Troul and Whileho	rse Croeks
	C A L I F O R	N I A 20H0 20H0 N 1 A 20H0 19H4 19H1 N	E V A DTHI A	15H20 15H3 016H0 15H48 015H3 016H6		21012 * 21022 21014P* 21017	Clear Lake 29 45 9E 3500 Clear Lake Exp. 29 45 9E 3800 Peavine Ridge 14 & 15 65 7E 3500 Timothy Lake 26 55 8E 3295	22G6 22G13	Annie Spring 19 315 6 P+ Billie Creek Divide 30 365 5	E \$300 1765	Oisaster Peak (Nev) a Oregon Canyon	8 40\$ 40E 6950
1	SNOW COURSES AND RELATED DATA MEASURING SITES	©ZOH 8 LEGEND	17H9. e1TH3	15H5 15H7		21017	Sontiom River	21 F22 22G24 20G12	Cold Springs Camp 12 355 to Crazyman Flat 9 345 15	E 6100 1864 F 6100		10 415 38E 7800 1 415 37E 7450
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The Following Organizations Cooperate in the Oregon Snow Survey Work

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Soil and Water Conservation Districts of Oregon
COUNTY

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